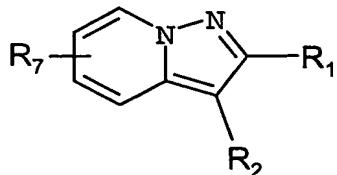


WE CLAIM:

1. A compound of Formula I:



5 Formula I

Wherein:

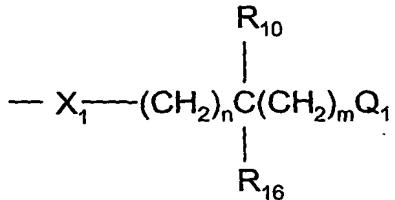
R1 is unsubstituted or substituted pyridine; unsubstituted or substituted furyl; or unsubstituted or substituted thiophenyl; wherein the substitution may be one or more of 10 the following: (C1-C6)alkyl, (C2-C6)alkenyl, (C1-C6)alkoxy, (C1-C6)alkylthio, trifluoromethyl, halo, N-morpholino, phenylthio;

R2 is unsubstituted or substituted quinoline; unsubstituted or substituted phenyl; unsubstituted or substituted naphthalene; unsubstituted or substituted pyridine; 15 unsubstituted or substituted quinazoline; unsubstituted or substituted cinnoline; unsubstituted or substituted indole; unsubstituted or substituted imidazo[1,2-a]pyridin-2-yl; unsubstituted or substituted benzofuran; unsubstituted or substituted dihydrobenzofuran; unsubstituted or substituted dihydrobenzo[1,4]dioxane; unsubstituted or substituted benzodioxolane; unsubstituted or substituted benzothiophene; unsubstituted 20 or substituted 2-aminobenzimidazole; unsubstituted or substituted imidazo[1,2-a]pyridine; wherein the substitution may independently be one or more of the following: hydrogen, (C1-C6)alkyl, (C2-C6)alkenyl, (C2-C6)alkynyl, (C1-C6) alkylhalide, (C1-C6)alkoxy, (C2-C6)alkenyloxy, (C2-C6)alkynyloxy, (C1-C6)alkylthio, (C1-C6)alkylsulphinyl, (C1-C6)alkylsulphonyl, (C1-C6)alkylamino, di-[(C1-C6)alkyl]amino, (C1-C6)alkoxycarbonyl, N-(C1-C6)alkylcarbamoyl, N,N-di-[(C1-C6)alkyl]carbamoyl, 25 aminoxy, N-(C1-C6)alkyl aminoxy, N,N-di-[(C1-C6)alkyl]aminoxy, (C2-C6)alkanoyl, (C2-C6)alkanoyloxy, (C2-C6)alkanoylamino, N-(C1-C6)alkyl-(C2-C6)alkanoylamino, (C3-C6)alkenoylamino, N-(C1-C6)alkyl-(C3-C6)alkenoylamino, (C3-C6)alkynoylamino, N-(C1-C6)alkyl-(C3-C6)alkynoylamino, sulphamoyl, N-(C1-C6)alkyl-

C₆)alkylsulphamoyl, N,N-di-[(C₁-C₆)alkyl]sulphamoyl, (C₁-C₆)alkanesulphonylamino, N-(C₁-C₆)alkyl-(C₁-C₆)alkanesulphonylamino, carboxamide, ethylene, phenyl, thiophenyl, aminophenyl, phenylthio, halo, cyano, pyridinyl, arylalkyl, hydroxy, N-pyrrolidino, N-morpholino, carboxyl, [5-phenyl-1,2,4-oxadiazole-3-yl]methoxy, 6-5 methyl-pyridazin-3-yl-oxy, (5-oxo-2-pyrrolidinyl)methoxy, 2-(4,5-dihydro-1H-imidazolyl), N, N-dialkylcarbamoyloxy, 1-hydroxy-1-methylethyl, 4-fluorophenyl, 3,4-methylenedioxophenyl, trifluoromethyl, trifluoromethoxy,

or a group of the formula

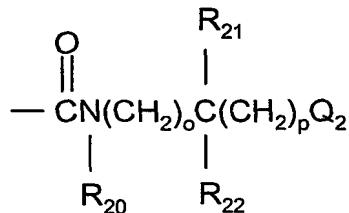
10



wherein: X₁ is O, N, S, SO₂, NR₁₃, C(O), or bond; Q₁ is hydrogen, phenyl, 5-(2,2-difluoro-1,3-benzodioxolyl), C(O)Q₅, or pyridyl when m and n are independently 0-2, except when one is 0 the other cannot be 0; Q₁ is OR₁₁, NR₁₁R₁₂, halo, N-morpholino, N-piperazino-N'R₁₃, N-imidazolyl, N-pyrazolyl, N-triazolyl, N-(4-piperidinylpiperidine), SO₂R₁₄, SOR₁₄, NHSO₂R₁₅, acetamido, N-phthalimido, N-oxazolidino, N-imidazolino, N-benzoxazolidino, N-pyrolidinonyl, N(N'-methylbenzimidazolino), N,N-di(C₁-C₄)alkylamino(C₁-C₄)alkoxy, N-benzimidazolino; when m and n are independently 0-2, but one or the other of m or n is not 0; Q₅ is hydroxy, methoxy, amino, diethylamino, dimethylamino; R₁₀ is hydrogen, halo, (C₁-C₆)alkyl; R₁₁ and R₁₂ are independently hydrogen, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, arylalkyl, (C₃-C₈)cycloalkyl, (C₃-C₈)cycloalkylmethyl, 4-(N-methylpiperidinyl), pyridyl, or R₁₁ and R₁₀ can be taken together to form a 4, 5, 6, or 7 membered ring, or R₁₁ and R₁₂ can be taken together to form a 3, 4, 5, 6, or 7 membered ring; R₁₃ is hydrogen, (C₁-C₆)alkyl, 2-methoxyphenyl, 2-pyridimidinyl; R₁₄ is 2-pyrimidinyl, N-methyl-2-imidazolyl, 4-chlorophenyl, 2-pyridylmethyl; R₁₅ is (C₁-C₆)alkyl, N-methyl-4-imidazolyl; R₁₆ is hydrogen, halo, arylalkyl, aryl, or a group of the formula

(C4)alkylamino(C1-C4)alkoxy, N-benzimidazolino; when m and n are independently 0-2, but one or the other of m or n is not 0; Q₅ is hydroxy, methoxy, amino, diethylamino, dimethylamino; R₁₀ is hydrogen, halo, (C1-C6)alkyl; R₁₁ and R₁₂ are independently 5 hydrogen, (C1-C6)alkyl, (C1-C6)alkoxy, arylalkyl, (C3-C8)cycloalkyl, (C3-C8)cycloalkylmethyl, 4-(N-methylpiperidinyl), pyridyl, or R₁₁ and R₁₀ can be taken together to form a 4, 5, 6, or 7 membered ring, or R₁₁ and R₁₂ can be taken together to form a 3, 4, 5, 6, or 7 membered ring; R₁₃ is hydrogen, (C1-C6)alkyl, 2-methoxyphenyl, 2-pyridimidinyl; R₁₄ is 2-pyrimidinyl, N-methyl-2-imidazolyl, 4-chlorophenyl, 2-pyridylmethyl; R₁₅ is (C1-C6)alkyl, N-methyl-4-imidazolyl; R₁₆ is hydrogen, halo, arylalkyl, aryl,

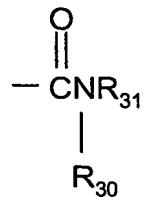
or a group of the formula:



wherein: Q₂ is hydrogen, 4-imidazolyl, or C(O)NR₂₄R₂₅ when o and p are independently 0-2; Q₂ is OR₂₃, NR₂₄R₂₅, or N-morpholino, when o and p are independently 0-2, but one or the other of o or p is not 0; R₂₀ is hydrogen, or (C1-C6)alkyl; R₂₁ is hydrogen, (C1-C6)alkyl, or R₂₁ and R₂₀ can be taken together to form a 4, 5, 6, or 7 membered ring; R₂₂ is hydrogen, (C1-C6)alkyl, arylalkyl, aryl, or R₂₁ and R₂₂ can be taken together to be a 3, 4, 5, 6, 7 membered ring; R₂₃ is hydrogen or (C1-C6)alkyl; R₂₄ is hydrogen, (C1-C6)alkyl, or R₂₄ and R₂₅ can be taken together to form a 3, 4, 5, 6, or 7 membered ring, or R₂₄ and R₂₀ can be taken together to form a 6 or 7 membered ring; R₂₅ is hydrogen, (C1-C6)alkyl, or acetyl,

-87-

or a group of the formula



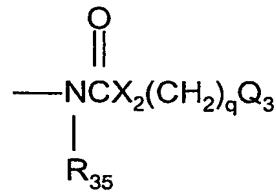
wherein: R_{30} is hydrogen, or (C1-C6)alkyl; R_{31} is hydrogen, (C1-C6)alkyl, 2-pyridyl, pyridylmethyl, amino, or hydroxy,

5 or a group of the formula



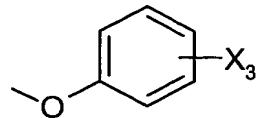
wherein: R_{32} and R_{33} are each independently hydrogen, (C1-C6)alkyl, acetyl, (C1-C4)alkylsulphonyl, or R_{32} and R_{33} can be taken together to form a 4, 5, 6, or 7 membered 10 ring,

or a group of the formula



wherein: X_2 is CH_2 , O, or N; q is 2-3 except when Q_3 is a bond, q is 0-3; Q_3 is $\text{NR}_{36}\text{R}_{37}$, 15 or OR_{38} , and R_{35} is hydrogen, or R_{35} and Q_3 can be taken together to form a 5 membered ring; R_{36} , R_{37} , and R_{38} are each independently hydrogen, or (C1-C6)alkyl,

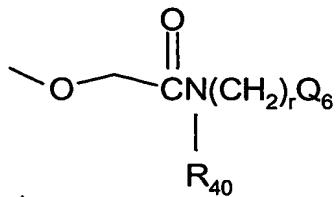
or a group of the formula



20

wherein: X_3 is cyano, carboxamide, N,N-dimethylcarboxamide, N,N-dimethylthiocarboxamide, N,N-dimethylaminomethyl, 4-methylpiperazin-1-yl-methyl or carboxylate,

or a group of the formula



wherein: Q_6 is $\text{NR}_{41}\text{R}_{42}$; r is 2-3; R_{40} is hydrogen, or (C1-C6)alkyl; R_{41} and R_{42} are hydrogen, (C1-C6)alkyl, or R_{41} and R_{40} can be taken together to form a 6 or 7 membered ring,

or a group of the formula



wherein: Q_7 is hydroxy, methoxy, dimethylamino, or N-piperidinyl;

10

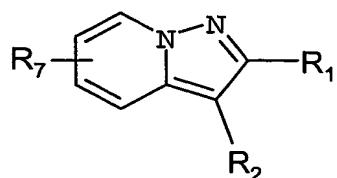
and wherein R_7 is hydrogen; benzyl; aryl; C₁-C₄ alkyls; halogen; -CO₂(C₁-C₄ alkyl); -CONR₆R₆; -C₁-C₄ alcohol; -SO₂(C₁-C₄ alkyl); -COR₈;

wherein R₆ is (C₁-C₄alkyl)R₉; R₈ is (C₁-C₄alkyl) or (C₂-C₄alkenyl); and R₉ is NR₃R₄, wherein R₃ and R₄ are each independently (C₁-C₄alkyl);

15

and the pharmaceutically acceptable salts, esters and prodrugs thereof.

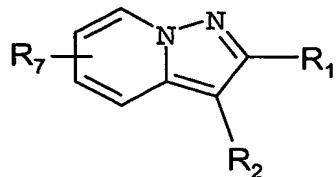
2. A compound of the formula:



where R₂ is substituted or unsubstituted 4-quinoline.

20

3. A compound of the formula:



where R₂ is substituted or unsubstituted phenyl.

5 4. A compound of either of Claims 1, 2, or 3 where R₁ is substituted or
unsubstituted 2-pyridyl.

5. A compound of either of Claims 1, 2, or 3 where R₇ is hydrogen.

10 6. A compound according to Claim 1 selected from the group comprising:

4-[2-(6-Ethyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinoline,

[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinoline-
7-carboxylic acid methyl ester,

4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-

quinoline-6-carboxylic acid methyl ester,

4-(5-Benzyl-2-pyridin-2-yl-pyrazolo[1,5-a]pyridin-3-yl)-quinoline-
7-carboxylic acid methyl ester,

3-(4-Fluoro-phenyl)-2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-

20 a]pyridine-6-carboxylic acid (2-dimethylamino-ethyl)-amide,

4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-

quinoline-6-carboxylic acid (2-dimethylamino-ethyl)-amide,

4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-

quinoline-7-carboxylic acid (2-dimethylamino-ethyl)-amide,

5-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-

benzofuran-2-carboxylic acid (2-dimethyl amino-ethyl)-amide,

4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-

quinoline-7-carboxylic acid [3-(4-methyl-piperazin-1-yl)-propyl]-amide,

4-[2-(6-Methoxy-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinoline,
4-[2-(6-Ethoxy-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinoline,
5 3-(4-Fluoro-phenyl)-2-(6-methoxy-pyridin-2-yl)-pyrazolo[1,5-
a]pyridine,
2-(6-Ethoxy-pyridin-2-yl)-3-(4-fluoro-phenyl)-pyrazolo[1,5-
a]pyridine,
7-Benzyl-4-[2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-
10 yl]-quinoline,
3-{4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinolin-7-yl}-acrylic acid methyl ester,
3-{4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinolin-7-yl}-acrylic acid,
15 4-[2-(6-Ethylsulfanyl-pyridin-2-yl)-pyrazolo[1,5-a]-pyridin-3-yl]-
quinoline,
4-[2-(6-Phenylsulfanyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinoline,
4-[2-(6-Morpholin-4-yl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
20 quinoline,
3-(4-Fluoro-phenyl)-2-(6-methylsulfanyl-pyridin-2-yl)-
pyrazolo[1,5-a]pyridine,
3-(4-Methylsulfanyl-phenyl)-2-(6-methylsulfanyl-pyridin-2-yl)-
pyrazolo[1,5-a]pyridine,
25 Dimethyl-(2-{4-[2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-
3-yl]-quinolin-7-ylsulfanyl}-ethyl)-amine,
2-(Pyridin-2-yl)-3-(quinolin-4-yl)-pyrazolo[1,5-a]pyridine-5-
carboxylic acid dimethylamide,
2-(Pyridin-2-yl)-3-(quinolin-4-yl)-pyrazolo[1,5-a]pyridine-6-
30 carboxylic acid dimethylamide,
4-[2-(6-Vinyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinoline,

6-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-imidazo[1,2-a]pyridin-2-yl-amine,
6-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-1H-benzoimidazol-2-yl-amine,
5 [3-(4-Fluoro-phenyl)-2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-6-yl]-methanol,
6-Allyloxymethyl-3-(4-fluoro-phenyl)-2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridine,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-10 quinoline-7-carboxylic acid (3-pyrrolidin-1-yl-propyl)-amide,
3-{4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinolin-7-yl}-propionamide,
3-{4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinolin-7-yl}-N-(3-pyrrolidin-1-yl-propyl)-propionamide,
15 N-(2-Dimethylamino-ethyl)-3-{4-[2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinolin-7-yl}-propionamide,
2-Pyridin-2-yl-3-quinolin-4-yl-pyrazolo[1,5-a]pyridine-5-carboxylic acid (3-dimethylamino-propyl)-amide,
20 4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinoline-7-carboxylic acid (2-hydroxy-ethyl)-amide,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinoline-7-carboxylic acid hydrazide,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-25 quinoline-7-carboxylic acid (3-hydroxy-propyl)-amide,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinoline-7-carboxylic acid methylamide,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinoline-7-carboxylic acid (3-ethoxy-propyl)-amide,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-30 quinoline-7-carboxylic acid (3-morpholin-4-yl-propyl)-amide,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-quinoline-7-carboxylic acid (3-imidazol-1-yl-propyl)-amide,

4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinoline-7-carboxylic acid (3-dimethylamino-propyl)-amide,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinoline-7-carboxylic acid [2-(2-methoxy-phenyl)-ethyl]-amide,
5 4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinoline-7-carboxylic acid (2-morpholin-4-yl-ethyl)-amide,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinoline-7-carboxylic acid amide,
Dimethyl-(3-{4-[2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-
10 3-yl]-quinolin-7-yloxy}-propyl)-amine,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-7-(2-
morpholin-4-yl-ethoxy)-quinoline,
Diisopropyl-(2-{4-[2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-
a]pyridin-3-yl]-quinolin-7-yloxy}-ethyl)-amine,
15 4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-7-(2-
pyrrol-1-yl-ethoxy)-quinoline,
Dimethyl-(1-methyl-2-{4-[2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-
a]pyridin-3-yl]-quinolin-7-yloxy}ethyl)-amine,
Methyl-(3-{4-[2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-
20 yl]-quinolin-7-yl-oxy}-propyl)-amine,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-7-(2-
piperidin-1-yl-ethoxy)-quinoline,
Diethyl-(2-{4-[2-(6-methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-
yl]-quinolin-7-yloxy}-ethyl)-amine,
25 Dimethyl-{3-[4-(2-pyridin-2-yl-pyrazolo[1,5-a]pyridin-3-yl)-
quinolin-7-yloxy]-propyl}-amine,
7-(2-Morpholin-4-yl-ethoxy)-4-(2-pyridin-2-yl-pyrazolo[1,5-
a]pyridin-3-yl)-quinoline,
Diisopropyl-{2-[4-(2-pyridin-2-yl-pyrazolo[1,5-a]pyridin-3-yl)-
30 quinolin-7-yloxy]-ethyl}-amine,
4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-7-(3-
morpholin-4-yl-propoxy)-quinoline,

1-(3-{4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridine-3-yl]-
quinolin-7-yloxy}-propyl)-1,3-dihydro-benzimidazol-2-one

3-{4-[2-(6-Methyl-pyridin-2-yl)-pyrazolo[1,5-a]pyridin-3-yl]-
quinolin-7-yl}-propionic acid methyl ester,

5 Diethyl-{3-[4-(2-pyridin-2-yl-pyrazolo[1,5-a]pyridin-3-yl)-
quinolin-7-yloxy]-propyl}-amine,

Ethyl-methyl-{3-[4-(2-pyridin-2-yl-pyrazolo[1,5-a]pyridin-3-yl)-
quinolin-7-yloxy]-propyl}-amine,

10 4-(2-Pyridin-2-yl-pyrazolo[1,5-a]pyridin-3-yl)-7-(3-pyrrolidin-1-
yl-propoxy)-quinoline,

7-(3-Piperidin-1-yl-propoxy)-4-(2-pyridin-2-yl-pyrazolo[1,5-
a]pyridin-3-yl)-quinoline,

Diethyl-{2-[4-(2-pyridin-2-yl-pyrazolo[1,5-a]pyridin-3-yl)-
quinolin-7-yloxy]-ethyl}-amine,

15 Dimethyl-{2-[4-(2-pyridin-2-yl-pyrazolo[1,5-a]pyridin-3-yl)-
quinolin-7-yloxy]-ethyl}-amine,

and the pharmaceutically acceptable salts, esters and prodrugs thereof.

20 7. A pharmaceutical formulation comprising a compound according to any
one of Claims 1 to 6 or the pharmaceutically acceptable salt, ester or prodrug thereof in
admixture with an acceptable pharmaceutical carrier or excipient.

25 8. A method of inhibiting TGF-beta Type I Receptor Kinase in a mammal
comprising administering to a mammal in need of such treatment an TGF-beta Type I
receptor kinase inhibiting amount of a compound according to any one of Claims 1 to 6,
or the pharmaceutical formulation of claim 7.

30 9. A method treating conditions resulting from excessive production of TGF-
beta in a mammal in need of such treatment comprising administering a TGF-beta-
suppressing amount of a compound according to any one of Claims 1 to 6, or the
pharmaceutical formulation of claim 7.

10. A method treating cancer in a mammal in need thereof comprising administering to said patient a therapeutically effective amount a compound according to any one of Claims 1 to 6, or the pharmaceutical formulation of claim 7.

5 11. Use in the manufacture of a medicament of a compound according to any one of Claims 1 to 6 for inhibiting TGF-beta Type I Receptor Kinase.

10 12. Use in the manufacture of a medicament of a compound according to any one of Claims 1 to 6 for the treatment of conditions resulting from excessive production of TGF-beta.

13. Use in the manufacture of a medicament of a compound according to any one of Claims 1 to 6 for treating cancer.